

The Public Health Journal

VOL. IX.

JUNE, 1918

No. 6

The Trail of the Medical Vampire*

FREDERICK PAUL

Editor, *Saturday Night*, Toronto.

IT may seem a little strange to you that I should, as a layman, with no special knowledge of the healing art, undertake to talk to a representative body of physicians upon such a subject as patent or proprietary medicines. If I am somewhat familiar with this art of quackery, it is because of the connecting link between journalism and patent medicine advertising. It is not my purpose to attack personal tastes or habits. If people choose to drink Mrs. Winslow's Soothing Syrup for the laudanum it contains or Tanlac for the "uplift" it may give one, fully realizing what they are doing, that is their business and not mine. But the buyer is not knowingly making a choice of laudanum, nor does the average woman realize that the chief medicinal property of Tanlac is alcohol.

If patent medicine makers told the truth, the whole truth, and nothing but the truth, in respect to their concoctions, there would be no need for me to stand up and address you gentlemen. It is the lies, the misrepresentations, the holding out of false hopes with which I will deal. The patent medicine business is founded on a knowledge of human nature coupled with the making of false statements. Were they to tell the truth there would be little or no sale for their "cures". I will illustrate. There was Munyon and his alleged remedies. Munyon's Asthma Cure, as an example. Do you suppose that had he told the truth about his precious remedy, told the public that it was composed of "sugar and alcohol", that it would have had a large sale as a sure cure for asthma? It is obvious enough that Munyon would not have died a

Read before Annual Meeting Canadian Public Health Association, Hamilton, May 27-8, 1918.

millionaire if he had been obliged to tell the truth and incidentally many thousands of people suffering from asthma would probably have found real relief from some legitimate source.

At this point I cannot refrain from recounting some of the incidents having to do with the career of another individual, who thrived much as did Munyon, and who also passed on a few months ago. I refer to Dr. Hartmann of Peruna fame. There never, perhaps, existed a concoction that had the popularity of Peruna. It was but a few years ago that Peruna was sold in car load lots. It was to be found in the medicine closet of something like fifty per cent. of householders of the continent. But along came the United States Government and overturned Dr. Hartmann's happy schemes. The doctor was informed by the United States Government's Excise Department that "unless he introduced some drugs into his Peruna", the U.S. Government would only allow it to be sold in places licensed to sell alcoholic liquors. So it was that Dr. Hartmann chose what he considered the least of two evils and put "laxative" in his mixture. Too late, however, he discovered that it was not laxative Peruna drinkers wanted, but booze disguised under a medical label. Those who had been accustomed to taking their toddy under the guise of Peruna, good old Peruna, found themselves in for a bad quarter of an hour when they attempted to obtain the accustomed stimulation. The inevitable happened. The sale of Peruna fell off enormously, but not, however, until Hartmann had amassed a huge fortune.

In respect to this particular "medicine" a well-known health official once to me said jokingly, "Let us go into the patent medicine business. Let us buy some cheap Italian vermouth, some gin and bitters. Let us mix three parts of vermouth to two of gin and put in a dash of bitters. Then we will bottle this up in short quarts, give it a fancy name and a fancy price, and advertise it to cure falling hair, fever and ague, bunions, dyspepsia and anything else you can suggest, and we can make a fortune selling it to the temperance trade. "Sounds like a cocktail to me", I replied. "So it is", said my friend, "but it is just as much a medicine as Peruna, and not so hard to take."

Before leaving Hartmann and going on to other matters, I will refer briefly to his booklet, "The Ills of Life." This was a sort of a house organ utilized to popularize Peruna and it might be read with interest, if not with profit, by the entire medical profession. For instance, it told us that Peruna would cure catarrh. It then went on to describe what catarrh is. You gentlemen may be surprised to know that pneumonia is catarrh of the lungs, consumption is also catarrh, dyspepsia is catarrh of the stomach, Bright's disease catarrh of the kidneys, and last but not

least appendicitis is catarrh of the appendix. It may be of interest to the medical profession to note that this old fraud was a graduate physician, and I am told a very able one, before he took up the Peruna business, so it was not ignorance that led him to make these absurd and fraudulent statements, statements which were unquestionably believed by millions of ill-informed people who liked the idea of buying disguised liquor at the druggists.

I will content myself with citing one more instance of impudent misrepresentation before taking up another aspect of the "case against patent medicines". This had to do with a concoction known as Nature's Creation, and in which I personally had a hand in forcing out of business under the False Advertising Bill, it being the first conviction registered in Canada under this Act. The Nature's Creation Company originally did business in Columbus, Ohio. It afterwards moved to Michigan and then on to Toronto. It is interesting to note that Nature's Creation was originally advertised to cure blood diseases—notably syphilis—but not being a financial success, the literature was changed, though the formulæ was unchanged, and it was launched in Canada as a cure for tuberculosis. It sold at \$5 per bottle, and according to the testimony at the trial, cost about 25c. per bottle. An analysis showed that the stuff contained a few simple drugs, none of which would cure anything, not to speak of curing a disease incurable, so far as drugs are concerned. A conviction was registered against these people and Nature's Creation as a cure for tuberculosis was forced to abandon business. It is interesting to note in connection with this case that the company in its defence gathered in numerous witnesses who testified to the benefits derived from the stuff, and I have no doubt that some were genuinely convinced that it had a curative value. So much for the power of suggestion.

I have taken up these three outstanding medical frauds merely to illustrate what it is possible to do when the manufacturer of a patent medicine is in no way hampered by the truth in respect to his advertised claims for it. The patent medicine business taken as a whole is inherently and inately fraudulent. It is a calculated method of obtaining money by false pretences. Its very character makes it so. How many would buy Dodd's and Doan's Kidney Pills if they were not advertised to cure Bright's Disease. How many would buy Swamp Root for their kidneys if advertised to contain, as it does, only alcohol, sugar, water, flavouring matter and little laxative? How many would sluice their insides with Buffalo's Lithia Water did they know that there is more lithium in the waters of Lake Ontario? What man's wife would buy Mayatone at 75c. a small package, with the hope of renewing the soft velvety skin of

her youth, if told that ninety per cent. was Epsom salts and ten per cent. borax with a little perfume thrown in? Perforce the patent medicine man must overstate his case, else the "suckers" would not rise to the bait. The bigger the lie the more successful the nostrum seller.

* * * *

One of the most pernicious frauds imaginable is the mail-order business by which deaf people are presumed to be made hear and the sightless to see, the maimed to walk and incurable maladies cured. In order to get a good start in this business one must first obtain a "diploma". These can readily be had for a trifle from such high-sounding institutions as the Carnegie University of Wilmington, Delaware, American Health College of Cincinnati and the like. *London Truth* once said that it was easier to start a university in the United States than it was a grog shop in England, and I can well believe it. Having picked the institute, one may open up correspondence by mail, and having answered some questions, also by mail (one could not fail to answer them correctly as both the questions and answers are on printed forms and before the applicant), the diploma, duly signed, sealed and witnessed, is forwarded. Of course the payment for the same, \$50, with or without trimmings, has already been made. This is a cash business. Next an office is hired on a back street, but one is very careful that the letterheads and other stationery contain the picture of the best looking business block in the city. Of course you do not state that your office is *not* contained in this business block, nor on the other hand do you deny the soft impeachment. Next you purchase or rent what is known in the trade as a "sucker" list. This, of course, after you have decided in what line you will specialize. The "sucker" list is simply the names and addresses of some thousands of prospective customers, deaf or blind people, victims of nervous debility, and the like. These letters are even sorted as to nationality. The "suckers" are then written to, usually addressed as "dear friend", with the word "confidential" in a prominent position. When this is all done you have made a fair start to cure up the universe, no matter what is the matter with it.

It may be interesting to you to know how these "sucker" lists are obtained. Once a person has written to a patent medicine company or a quack healer, the name and address is never lost track of. They are carefully compiled, tabulated, and ready for business. These names are dealt in to a surprising extent and it is not at all unusual for a name brokerage house to advertise for sale as many as half a million names, under possibly a dozen or twenty headings, such as asthma letters, kidney letters, dyspepsia letters, deaf letters, heart letters and the like. This explains the reason why one once on the "sucker" lists continues to receive for years through the mails all sorts of "come on" literature.

The explanation of how people rise to this bait to the extent of giving to persons unknown to them intimate details as to their state of health, etc., is that ever present human characteristic of hoping to get something for nothing. Thus it is that "free treatments", "tell us your symptoms and we will prescribe free," and all that sort of thing is ever reaching a new class of readers that rise readily to the bait.

* * * *

I have described some of the coarser, cruder schemes of the patent medicine game. There are, of course, many other and more subtle forms of relieving the public of its money. For instance there are the innumerable headache remedies that are advertised as harmless, but which are heavy with caffeine and phenacetin, and I may say in passing that my experiences have shown me that an astounding proportion of women in this high tension age are utilizing such stuff for their daily cocktail. Then there are flesh foods and things to make you fat, and other things to make you thin, and so on through a list that would take hours to discuss.

I now come to the point of asking: What is the remedy for all this? There is one. There must be one. It is estimated that the United States spends one hundred million dollars annually on patent medicines. I may say in passing that according to Tanlac advertisements that company boasts of selling in the United States more than nine million bottles of their concoction in three years, and it costs the user a dollar a bottle, plus the war stamp. The same company sold through one Toronto drug house twenty-two thousand bottles of this "bracer" between July, 1917 and the turn of the year. It is estimated that Canada's dope-consuming public drinks yearly about \$8,000,000 worth of patents.

The cure for this astounding waste of both wealth and health is not far to seek. Cut out their publicity. Advertising is the aggressive force ever fighting for these frauds. Advertising experts will tell you that ninety per cent. of the earning capacity of the prominent nostrums is represented by their advertising. No quack medicine could live without advertising, while the good preparations—and there are such, as every physician knows—can and continue to do business without the aid of the printing press and the distribution of lying literature.

It is useless to hope that the press of this continent, with a few outstanding exceptions, will whole-heartedly enter into a campaign for the extermination of the patent medicine fakir. They will and do contend that the case against the patent medicine man has never been proven. They will continue to print the questionable testimonials of Nuxated Iron and such stuff until the law intervenes, if it ever does. The explanation is—they need the money.

What could be more paradoxical? Here in Ontario we make a law prohibiting the advertising of our native grown wines. Our wine growers under the present law cannot send out a printed circular or a letter soliciting an order or even describing their wares. But at the same time our public prints fill their columns with the advertising of patent nostrums, which run the gamut from the useless to the deadly.

In conclusion, I may say that sickness and suffering will continue to be exploited for the sake of gain until such bodies as yours become active and make themselves felt at governmental headquarters. It is only thus that the slimy trail of the medical vampire can be cut.

Venereal Diseases as Communicable Diseases

MAURICE M. SEYMOUR, M.D., D.P.H.

For the Province of Saskatchewan

IN 1915 it was estimated that in one European army a number of soldiers equal to sixty divisions was ineffective on account of venereal diseases, and the fact that 30,000 men have already been found to be suffering from venereal diseases in the United States Army, so recently entering the war, is sufficient demonstration that the problem is one deserving of immediate and serious attention.

Investigation has proved that a large proportion of venereal infections occur before enlistment and that therefore the incidence among the civil population is very high. In the Army, methods of controlling infection under strict discipline can be made efficacious in reducing the incidence, but unfortunately in civil life the problem is much more difficult to deal with. The public is now, however, awakening to the seriousness of this great civilian problem and all public bodies are concerning themselves with regard to ways and means.

The lack of authentic information on the prevalence of these diseases has been found to be a great obstacle in the study of the problem.

In the words of Dr. Gordon Bates, who discovered when attempting to get statistics, that twelve per cent. of patients in general wards in Toronto General Hospital gave a positive Wasserman reaction: "One cannot but feel, that in regard to these subjects we are hampered by our ignorance of both their extent and seriousness. I am unable to find any extensive Canadian statistics as to the prevalence of prostitution, and only lately has the work of a few investigators using the Wasserman reaction given us the idea that in dealing with venereal diseases we are attempting to solve a problem of extreme gravity."

The necessity for measures for reducing the incidence in civil life is therefore apparent.

SYPHILIS.

Syphilis is a specific communicable disease caused by a definite organism called "Spirochaeta Pallida" or "Treponema Pallidum".

The disease is conveyed from an infected to a healthy person by actual contact, through the means of infected objects, or it may be transmitted to offspring through one or both parents, when it is known as "hereditary syphilis".

Syphilis runs a chronic course of indefinite duration; its manifestations, although following a more or less regular order, are intermittent

in character and consist of numerous symptoms or lesions, which may, under different forms and degrees of gravity, affect any tissue or part of the body.

ETIOLOGY.

Shaudinn in collaboration with Hoffmann, made the very important announcement in 1905 of the discovery of a spiral organism, which they had constantly found in syphilitic lesions, and which from its pale appearance, low refraction and spiral shape, was named the "*spirocheta pallida*" and later the "*treponema pallidum*".

The standard association of the *spirocheta pallida* with syphilitic manifestations led to its being generally accepted as the specific cause of the disease; but proof of this fact has since been supplied by Noguchi, who in 1911 and 1912 succeeded in obtaining pure cultures of the *treponema pallidum*, which, when inoculated into experimental rabbits, produced in due time lesions characteristic of syphilis and containing numerous *treponema*. Inoculation of cultures in monkeys was also followed by local manifestations presenting the appearance of the initial sores in man, by using material of human origin. Additional evidence was procured by the blood of monkeys giving a positive Wasserman reaction, which had been inoculated with pure cultures obtained from human lesions, thus demonstrating the relations of the *treponema pallida* to the serum test and also to the similar character presented by the cultivated strains with the species existing in the human syphilitic lesions.

The majority of authorities class the *treponema* among the protozoa.

The *treponema pallidum* is a fine, tenuous, spiral organism varying from ten to twenty-six microns in length and of almost immeasurable thickness, one-quarter to one-half microns; it presents a number of deep, well accentuated regular spirals, and finely pointed extremities; it moves to and fro by rotation on its axis and retains its spiral form while in motion. It requires to be differentiated from the:

spirocheta refringens,
spirocheta micro-dentium,
spirocheta macro-dentium, and the
spirocheta buccalis.

The *treponema pallidum* has been found in practically all the lesions of acquired syphilis and in all its stages. It is most abundant in the primary sore, although difficult then to find; it is also present in the blood and lymphatics; it is found in the organic lesions of the tertiary stage, notably in aortitis, as well as in gummata, tabes and paresis. It is present in the lesions of early and late hereditary syphilis, being

especially abundant in the organic lesions of children dying of congenital syphilis, particularly in the liver.

The presence of the organisms in the initial sore establishes, without any doubt, the diagnosis of syphilis, and indicates the need of immediate specific treatment without having to wait, as formerly, for the appearance of the secondary symptoms. Hoffmann's method of aspirating an enlarged gland in the groin or elsewhere is a convenient method when the treponema cannot be demonstrated in the ordinary lesions.

The life of the treponema pallidum is not yet determined. The work of MacDonagh (*Lancet*, October 1912) and Ross (*British Medical Journal*, December 14th, 1912) show that the spirochetal form of the parasite is but a single stage in the development of the organism, and that apparently the cycle begins with the entrance of granular or spore like bodies into mononuclear cells. From these granules (termed inclusion bodies by Ross) short, wavy, filamental processes develop.

MacDonagh believes infection is probably conveyed by these sporozoites or infected granules and not in the spirochetal stage. This seems to be confirmed by the period of incubation required after the infection, during which time the parasite undergoes its development. It would further explain the failure of salvarsan or mercury to completely sterilize the infected individual, although both are fatal to the spirochetal form and also the recurrences and later manifestations of the disease resulting from the subsequent development of these resistant granules may also account for some examples of contagion from infected objects, because the spirocheta themselves are extremely delicate, anaerobic organisms that do not survive desiccation.

PATHOLOGY.

Syphilitic lesions consist essentially of an inflammatory hyperplasia. In the skin the lesions vary in degree from a slight, scarcely appreciable, macular swelling to that of the tubercular eruptions in which the entire thickness of the skin is involved in all syphilitic lesions. The walls of the blood-vessels are the seat of inflammatory changes in the infiltrative process which usually surrounds the vessel. The changes, which take place in the syphilitic lesions may terminate in three different ways:

1. The infiltration may undergo complete absorption, leaving no traces or only very insignificant ones.
2. It may undergo a fibrous organization or sclerosis.
3. It may undergo a gummatous or caseous change, ending in necrobiosis.

The first termination occurs in the lesions of the first and second stages. The two last endings belong to the tertiary stage and constitute

the gummatous and sclerotic processes, both of which are often associated or combined. The most serious lesions of syphilis are those connected with blood vessels.

PRIMARY STAGE.

In acquired syphilis (by far the most common) the initial lesion or sore always develops at the point of contagion and is accompanied with more or less pronounced enlargement of the neighbouring glands. The period of incubation may be from fifteen to forty days; but most commonly the initial sore appears from the twenty-first to twenty-sixth day following exposure. The appearance of the secondary or constitutional symptoms takes place, as a rule, from forty to forty-five days, after the appearance of the chancre. While the primary stage is limited to the local sore, the manifestations of the secondary period are represented by many and scattered symptoms and lesions varying in character and degree and consisting of eruptions on the skin, erosions and ulcerations of mucous membranes, falling of hair, enlargement of glands, affections of the nails, muscles, periosteum, bones and of the special organs.

TERTIARY STAGE.

There is a certain degree of regularity followed by the primary and secondary periods, that cannot be said of the third stage, which justifies the remark of Fournier: "When does it begin and when does it end?" The tubercular and gummatous manifestations are peculiar to the third stage; the duration of the third stage is indefinite; its symptoms may appear during the first year or few months of the disease or they may not appear for five, ten, twenty, and even as late as fifty years or more after the disease is contracted.

The tertiary stage is marked by the gravity of the manifestations as well as their destructive tendency.

It is extremely important that a diagnosis of the primary lesion be made which can be done from the known period of incubation from the objective characteristics, the hard swelling at the base, the enlargement of the glands in the neighbourhood, and the finding of the *treponema pallidum*.

The serological reaction is rarely positive before the second or third week. The differentiated diagnosis rests chiefly between Herpes, the simple venereal ulcer or chancre, and occasionally the ecthymatous ulcerative lesions of scabies.

The demonstration of the *treponema* establishes the diagnosis and allows of the immediate beginning of treatment when it can be most effective in destroying the invading organisms, and preventing or lessening the later symptoms.

Until the beginning of the nineteenth century the distinction between gonorrhœa and syphilis was not well known. To Albert Neisser belongs the credit in 1879, of the discovery of the specific organism which is the cause of ocular and urethral gonorrhœa.

In the middle of the nineteenth century the abortive treatment was first made use of by Voillemier.

Gonorrhœa is contracted in only one way, that is by contagion. When a man has contracted an attack of gonorrhœa, sensations of pain and burning in his urethra soon make known to him the nature of his disease; but once the acute stage has passed off, he often under-estimates the seriousness of his case. If then he neglects treatment or postpones it, and finally fails to be cured, he soon forgets that he is a source of danger to others. If while in this condition he marries, he infects his wife, and the absence of acute symptoms at this time, fails to warn the unfortunate young woman of the true nature of her illness, which so frequently ends in serious inflammatory conditions of the organs of generation, and ultimately in complete sterility.

Gonorrhœa is one of the most frequent causes of depopulation, as well as being responsible for wrecking the lives of so many men, and the cause of sterility in so many women.

It is the duty of the medical profession to educate the public as to the true nature of gonorrhœa and the importance of having every case thoroughly cured.

DESCRIPTION OF SYPHILIS AND GONORRHŒA.

It is obvious that one of the best means of combating these diseases is education of the public with regard to their nature and how they are spread, and if young men can be made to realize the seriousness of these diseases, their disabling and injurious results, the majority of them will avoid infection.

MEASURES ADOPTED IN CANADA.

At the present time the only provinces having legislation with regard to these diseases are Saskatchewan and Ontario, both of recent date.

The regulation of both provinces requires that venereal disease be reported and that those suffering be placed under proper treatment.

The Saskatchewan regulations require all persons affected with venereal disease to report to a physician and remain under treatment until a certificate of cure is granted. Physicians are required to report to the Commissioner of Public Health all cases treated by them, by number only, except in cases where the patient should not report for treatment, for thirty days, when the name must be reported and treatment enforced.

In the event of the patient's changing his physician, the second consulted must immediately notify the first physician that the patient is continuing treatment, and is under his care.

Physicians are also supplied with circulars on venereal diseases which they are required to hand to patients at the first examination along with a copy of the regulations.

Provision is also made that no person suffering from venereal disease shall be employed as barber, waiter, butcher or teacher, or engage in any way in the handling or manufacture of food.

All reports are confidential and secrecy is observed in dealing with the matter.

The pioneer country in this direction is Western Australia where a Bill for the Control of Venereal Disease was passed in 1915.

This Act, and the Amendments which were found necessary in attempting to administer it, form a basis for Canadian legislation, as conditions in Canada are somewhat similar. In Australia the Commonwealth came to the aid of the States adopting these measures, and agreed to subsidize them on £1 for £1 basis up to £4,000 (\$20,000.00) for the first year, and £2,000 (\$10,000.00) subsequently, and this sum is expected to amount to half the expenditure. During 1916 free treatment and night clinics were established by the Department of Public Health, and literature was prepared and issued with the object of educating the public.

Convictions were secured against unqualified persons treating venereal diseases. It was found difficult to organize the necessary treatment and accommodation for these diseases as laid down in the Act, but it was anticipated that by the end of 1917 the scheme would be complete and working in full swing.

The 1916 records were found to justify the legislation and for the last seven months of the year 1,117 cases were notified as follows:—747 gonorrhœa, 320 syphilis and 50 chancroid.

The high proportion of cases of syphilis would go to show that a large number of cases of gonorrhœa do not seek skilled attention. In the case of syphilis, of the 320 cases only 47 occurred in females—that is a proportion of seven to one—and in the case of primary syphilis there is only one female affected to forty male. Whereas in secondary syphilis the proportion becomes one to three-five. This would go to prove that in women the primary sore is often overlooked and females missed in the primary stages constitute a grave danger.

Making venereal disease reportable is the first essential step towards reducing the number of these diseases. Provision should be made for early diagnosis, in order that treatment may be commenced without delay. Free treatment for those unable to pay should also be provided for.

Modern science has made such progress both in the treatment of syphilis and gonorrhœa that it is possible to cure the former, and even the worst forms of urethral inflammation can now be cured by appropriate treatment.

The most efficient manner of dealing with and reducing the danger from venereal diseases as communicable diseases is the insistence of all cases remaining under treatment until cured.

The Relation of Alcohol to the Acquisition of Venereal Diseases*

CAPTAIN GORDON BATES,
Officer in charge of Venereal Diseases, M.D. No. 2.

OF the fact that alcohol has a very definite relation to the acquisition of venereal disease few physicians or probably no physicians who come in contact with cases of venereal disease will deny. The story "it would not have happened had I not been drunk" is so common as to make one think that if we could do away with alcohol one would do a great deal for the elimination of venereal diseases. While all this is true as a matter of incidental experience it has been thought well in order to provide a concrete basis to argue from to tabulate the result of the examination of some 900 venereally infected men. I had hoped that this number would have been much larger, but the exigencies of war work have made it impossible to extend the investigation as far as might have been. The figures as tabulated have been gathered from cases in various hospitals, civil and military. Dr. Haven Emerson and Captain Alec Nichol Thomson of New York, Major Lauterman of Montreal, Captain Hill of London, Drs. Hare and Trow of Toronto General Hospital and the officers of the Venereal Section, Base Hospital, Toronto, have been good enough to have questionnaires filled in for me and what I have to present to-day is largely a summary of this work.

The first thing investigated was the percentage of cases in which alcohol seemed to be a definite causal factor. That is either an infected man claimed that this was the case and gave details or else the details filled in in his questionnaire led us to infer a relation between alcohol and his infection.

First of all I shall deal with a series of 514 cases from Toronto—a large number of whom I questioned myself. Of these 514 cases, fourteen single men or about 3% claimed to have never been exposed and were apparently innocent infections. Twenty-four married men or about 5% claimed that there was no source of infection other than their wives. All other cases were included in our investigation, leaving 476 men examined. Of these in 124 cases, or 26%, alcohol seemed to be a probable causal factor.

The next question gone into in this series was the possibility that as prohibition existed in all of the Provinces of Canada, except one, we

*Read before the Annual Conference of Charities and Corrections, Binghampton, New York, Nov. 13th, 1917.

might perhaps be able to obtain information as to its relation to venereal infection. With this object in view the cases were divided according to cities or other areas from which they came. The results were as follows:

Cases from—

Canada.....	362
United States.....	91
England.....	14
France.....	1
Other parts of the world.....	7

Of 362 cases from Canada, 59 or 16.4% showed an alcoholic relation, or eliminating the Province of Quebec, in all of which prohibition does not prevail, 12.8%.

Of 91 cases from United States, 46 or 50% showed an alcoholic relation.

An analysis of cases coming from various cities and districts is not without interest.

Of 224 cases coming from Toronto, a prohibition city, 23 men or approximately 10% had indulged in alcohol.

Of 311 cases coming from Ontario, a prohibition province, 37 or 11.9% show an alcoholic relation.

Of 17 cases from Montreal (non-prohibition), 10 or 59% show an alcoholic relation.

All other cases from the province of Quebec come from the non-prohibition areas of Hull and Quebec City. There are no cases from the non-prohibition parts of the province. This makes an average of 69% of these cases from Quebec showing an alcohol relation.

Halifax, a seaport, but not under prohibition, only has four cases, two of which confess to the influence of alcohol. One, however, was infected prior to prohibition (24%).

Winnipeg (prohibition) gives eight cases, two of which show the relation of alcohol. One is prior to prohibition (12 1-2%).

As to cities in the United States:

Cases.

Buffalo.....	13, alcohol a factor in	9 or 69%.
Chicago.....	12, alcohol a factor in	6 or 50%
New York.....	15, alcohol a factor in	10 or 66%
Other parts of		

United States 37, alcohol a factor in 20 or 46%

Of the 37 cases from United States three came from Kansas City, and one from South Carolina (prohibition areas). All the others are from non-prohibition states.

Of the total 46 cases from United States in which alcohol bears a relation three come from prohibition areas, 43 from non-prohibition areas, 6.5% from prohibition areas; 93.5% from non-prohibition areas.

The question of prophylaxis was then investigated by asking each infected man exactly what prophylaxis he had used. It was found that in 50% of the cases showing an alcoholic relation no prophylaxis of any sort was used. Of 331 cases showing no alcoholic relation, in 43% no prophylaxis was used. It was also found that in practically all cases where prophylaxis was used it was of an absurdly inadequate character and as a matter of fact was not prophylaxis at all.

Of 88 cases from Brooklyn Hospital Dispensary 25 showed an alcoholic relation, or 29%.

Prohibition states were represented by four from Seattle (a seaport) in prohibition territory; and three from South Carolina and in four of these alcohol was a factor.

Only three cases from Brooklyn Hospital Dispensary out of 44 show an alcoholic relation.

Of the cases from New York, 14 out of 31, or 45%, showed an alcoholic relation.

The question of prophylaxis investigated here showed that four times as many of the men who were not intoxicated made some attempt at prophylaxis, but the number was too small to be conclusive and in both intoxicated and non-intoxicated men the method of prophylaxis was obviously inadequate (aside from the fact that it did not protect him from contracting disease.)

In 167 cases from New York Wassermann Clinics a relation of alcohol to infection was found in 57, while in four the question was doubtful. The percentage here of positive cases was 35%.

Of the 93 cases infected in New York 34 or 36.5% showed an alcoholic relation. Of all the 167 cases in this series only two, one from Georgia and one from South Carolina came from prohibition states. Neither of these show an alcoholic relation. In other words no case coming from a prohibition state showed alcoholic relation.

From non-prohibition states the results are slightly different. States represented in addition to New York are New Jersey, Massachusetts, Pennsylvania, Connecticut, Louisiana, Ohio, Florida, Minnesota. The percentage of cases coming from these states which show an alcoholic relation is 22%—while as I have said the only two cases coming from non-prohibition states show no relation to alcohol whatever.

In these series other areas from which infections come are as follows: France, Mexico, Russia, Porto Rico, England, Italy, Ireland, Portugal, South America, Japan, Denmark.

If these areas above are included 66.2-3% of the cases show an alcoholic relation.

Of the cases in this series in which alcohol born no causal relation to infection 65% of the men infected made some attempt at prophylaxis.

Of the men who were intoxicated 35% made some attempt to prevent infection but again in most cases the attempt was of an obviously inadequate character.

A summary of 726 cases from the above sources is as follows: 200 or 27.5% show alcohol as a causal factor. Excluding the prohibition portions of Canada and the United States this percentage is considerably higher—about 35%.

VENEREAL PROPHYLAXIS—SUMMARY.

Of the cases in which alcohol was a factor 78 out of 200, or 39%, used some form of prophylaxis.

Of the cases in which alcohol was not a factor 232 out of 498 or 46% used some preventative. In both classes the character of the preventative was such as to render it of no value.

One or two things I think have been proven. The first is that a smaller percentage of venereal cases showing alcohol as a causal factor, come from prohibition areas than from areas in which alcohol is freely accessible.

I am going to take it for granted that everyone will acknowledge that the intoxicated man is more likely to make improper associations and more likely to become infected than the sober man. The conclusions of the Chicago Vice Commission and the English Royal Commission on Venereal Diseases verify this conclusion. So that if it is true that in non-prohibition areas a larger percentage of men confess to the influence of alcohol on their infection than in prohibition areas—and I believe that an extension of this enquiry would verify such a conclusion—if this is true the number of infections in non-prohibition areas would exceed the infection in prohibition areas by at least the difference in the number of men who confess that alcohol had a direct influence on their infection over those who did not.

But is this all? The particulars given by patients as to circumstances surrounding their infection are not without interest. A man infected in Buffalo tells me that he went to a house of prostitution on Oak Street, that there were sixteen girls in this house and that he became drunk and infected in the house. A man infected in Montreal goes to a house on C— Street, Montreal (giving the exact address) where there were twenty prostitutes, tells me that he became intoxicated on beer and whisky and that he would not otherwise have been infected. Another

man infected in Quebec. There was a crowd of men and women in this house—all were intoxicated. Another man met a woman in the rear-room of a saloon in Chicago. They both drank, he became intoxicated and went with her. These stories are fairly characteristic of non-prohibition areas. I have heard no similar story from the lips of men infected in any city where prohibition exists, and I believe it would be impossible to find such circumstances surrounding infections occurring in places where there is an attempt at enforcing prohibition.

In Toronto the common story as to the obtaining of liquor is "that a friend smuggled it in over the border for me", "that a man on the street gave it to me", "that I brought it home from Chicago", or "I don't know where it came from". In most cases there has been considerable difficulty in procuring the necessary alcohol. The source of infection is practically never an ordinary prostitute—generally it is a waitress, a domestic or a girl with some painful poorly paid occupation and infection takes place in her own rooming house, or perhaps in an available hotel or in a city park. Generally alcohol does not come into the transaction at all.

That the peculiarly degrading circumstances connected with infections in which alcohol bears a part are partly due to a low state of public morals we may admit. That the same public spirit which countenances flagrant prostitution countenances alcohol and alcoholic excesses. On the other hand the elimination of alcohol from the community is in itself both a factor in the lessening of prostitution of the ordinary character as well as of venereal infection.

But there is still something else to be considered in addition to the fact that alcohol is a direct factor in the acquisition of venereal disease. This indeed most of us will acknowledge. In investigating the question of venereal disease we should remember that we are dealing with a question which is essentially social—both in its causes and its end results. The medical aspect of it has received most attention because the physical and mental results of the disease have been treated by physicians. The investigation of the primary cases of venereal disease must be a social investigation, its eradication largely by applying social remedies. For that reason it is worth while asking what the community results of the elimination of alcohol are. Such results are just as important results as the taking of alcohol from a man who will otherwise get drunk, forget the ordinary amenities of social life, lose the normal inhibitory power which keeps him straight and end up by becoming venereally infected.

I am impressed by the fact that a very large percentage of venereally infected men are young unmarried men, that the women with whom they consort are young unmarried women, that poverty with all that follows

in its train, poor education, lack of recreation, improper friends, low ideals, and late marriage, are tremendous factors in the production of our thousands of cases of venereal disease.

The fact that the state is so organized that a normal life is impossible for most young people, that the natural inclinations of the average human being (Professor Irving Fisher classifies them into eight but perhaps that is somewhat arbitrary), that the natural human inclination for instance, for establishing a normal home, a happy marriage with all that it means, for undertaking a work for which one is best fitted and through which one can contribute most to the general welfare, for making a living which will enable one to keep oneself as a self-respecting normal human being should keep oneself. These natural human desires are thwarted for many of us by our present social organization.

In the light of the extremely serious results of venereal disease both for the individual and for the community one feels like saying that in the venereal disease question we have the greatest lever for social reform ever given us. I first believed in the elimination of alcohol from the community because I saw that it produced venereal disease directly. I believe that its elimination produces other results which make for better social organization. These results will not do away with either prostitution or venereal disease. But they are a great step in the right direction. Only by making a normal life possible for man and woman will we do away with the abnormal prostitution and its results. The elimination of alcohol will mean much. After that we will have a clearer field ahead of us and seeing our problem will be able to hit hard at the errors which still remain.

Modern Doctoring

Reprinted from THE NATION, Feb. 25, 1918.

THESE six books, translated from the French, form part of a series of military medical manuals under the general editorship of Sir Alfred Keogh. All the volumes are written by men who are held in high repute in the medical profession, and each volume is largely founded on first-hand experience obtained during the present war. Naturally, they vary in originality and in expression; but to doctors each one will prove interesting, stimulating, and practically useful. Anyone wishing for a concise statement of modern medical or surgical opinion on the various branches of medicine indicated by the titles could hardly do better than study these books.

It would be out of place in the pages of a non-technical journal to comment in detail on the subject-matter of these manuals. But, arising out of a consideration of them, are certain questions which have lately—perhaps always—much exercised the inquiring mind. There is a body of ill-informed popular opinion, of which Mr. Bernard Shaw has lately been the most conspicuous spokesman, the central doctrine of which is that the official medical corporation is largely occupied in suppressing the activities of real medical and surgical geniuses who do not happen to have gone through the orthodox curriculum and passed the orthodox examinations; and that the public is thus, against its will and its judgment, compelled to resort to the services of the less efficient licensed practitioners. To hear these people speak or to read their articles one would imagine that specialism, at any rate useful and practical specialism, was confined to unqualified and unregistered practitioners, such as Mr. Shaw's heroes, the osteopaths, bonesetters, Kellgrenites, and medical gymnasts. One has but to read such "orthodox" books as those named above to realize how altogether ill-founded this popular superstition really is.

There are certain forms of surgical and medical treatment which can adequately be performed by persons whose knowledge of anatomy, physiology, and pathology is altogether insufficient to make it possible for them to be competent general surgeons or physicians. And there are many branches of technique on the border-line or even within the domain of surgery which occasional "unqualified" persons may much more expertly perform than the average registered practitioner. Of such technical acts the number is legion, including, as they do, such diverse proceedings as the making of a poultice, the taking of a radiograph, and

the massage of a joint. But the actual application of treatment, while it is clearly the final aim, is by no means the most difficult, or the only important, part of the work of the surgeon or physician. Far and away the most difficult part of a doctor's work, no matter what his specialty may be, is the work of accurate diagnosis. And, without that, no rational treatment is possible. And it clearly is, to put it mildly, a convenience to the public that some indication shall be given by which it may distinguish those who have received some definite training in this craft and have been proved to possess, at any rate, a fixed minimum of technical knowledge. That there may be a few individuals who, in special branches of surgery, manage by other means to acquire as much technical knowledge and as much technical skill as the officially trained and registered, without themselves attaining the guild hall-mark, scarcely at all diminishes the necessity for the official restrictions. Nor is their utility materially lessened by the fact that a certain small percentage of comparative duffers manage to scrape through their examinations and obtain legal qualification. Nearly all human machinery has such limitations. Again, we may all agree that examinations afford a very inadequate test of human ability; but, especially in such a craft as that of the doctor, composed as it is so largely of science and of stereotyped manual operations, it is difficult to see what better means could be adopted for ensuring that every practitioner possesses a certain minimum of technical knowledge and technical skill.

That the actual work of massage, joint manipulations, radiography, and the like may be done quite well by men and women who are not themselves medical practitioners, is true. But, just as in the case of nursing, such work should be done only on the specific prescription of a surgeon or physician who has considered all the clinical features of the particular case. Mr. Barker—to take a celebrated example—may know as much about the pathology of joints and the *rationale* of their treatment as does any qualified person. But, short of the methods of favoritism and corruption which guide the compilers of our Honours List, it is difficult to see how, other than by the recognized examinations, such capable “unqualified” persons are to be registered and recognized without equally recognizing the hosts of ignorant charlatans who make similar claims. Mr. Shaw plumps for the methods of the Honours List. He says that the Archbishop of Canterbury or the University of Oxford should give to Mr. Barker a medical degree without his being asked to pass any examination at all, just as honorary degrees are given to prominent politicians. Where such degrees are not seriously intended to give their recipients the right to practice lethal arts on their fellow-citizens, they are harmless enough. But the inapplicability of the proceeding to such practical crafts as medicine and surgery scarcely needs

arguing about. And it is far better that one or two capable individuals should be driven to make their thousands a year without official recognition than that hundreds of ignorant bone-setters, ignorant even of the signs of inflammation, should be officially turned loose on the public, "straightening" stiff joints, pretending to move the "infiominate bone"—which Mr. Shaw seems to accept as the true cure for rheumatism—or "rotating the dorsal vertebræ," which is Mr. Shaw's cure for appendicitis.

The truth, of course, is that, whilst there is plenty of quackery practised by the orthodox medical profession—though in the very nature of the case not one-tenth of that practised by the unqualified—also among the qualified are plenty of "bone-setters" and joint manipulators at least as skilful as the most competent among the unregistered. One great distinction should never be forgotten. The one may advertise; the other may not. The cures of the one are taken for granted; those of the other are trumpeted to the world as miracles indicative of almost divine power.

People like Mr. Shaw meet some average practitioner and find that he is not a great scientist like his idol, Sir Almroth Wright, for example, and, taking the mental capacity of the latter as the desirable measure for a modern doctor, can see nothing but ineptitude and inefficiency in the other. Most attacks on the medical profession are conducted on a similar basis. The whole is attacked because the least is not equal with the greatest. Like the average man, the average doctor is by nature very conservative, prejudiced against new ideas and new ways. But that is not because he is a doctor, but because he is a man.

The system of medical training is still capable of great improvement. But never has it been so directly related, on the one hand to all relevant scientific knowledge, and, on the other hand, to the practical work of treating disease, as it is at present. It is doubtful if the official training and official tests employed in connection with any other profession or craft are so entirely relevant as in the case of a modern medical student. Moreover, never has the profession been so open-minded in its attitude towards new theories, new systems of treatment, as it is now. It would be difficult for Mr. Shaw, or his followers, to name any proposed line of treatment which can claim any rational basis in theory or any good results in practice that has not received the serious consideration and study of the medical profession. An examination of the files of the recognized medical journals will demonstrate the truth of this statement, and a study of the series of books, a batch of which formed the starting-point of this article, should convince the most rigidly unconventional "rebel".

H. R.

Why it is worth while to construct Sewerage Systems in the small Towns of Ontario

F. A. DALLYN

MR. CHAIRMAN, Ladies and Gentlemen:—It is but proper that I should express my appreciation of the honour of addressing this most representative gathering of Canadian, and more especially Ontario, medical officers of health, and of presenting to you some facts concerning a subject to my mind very pressing, and one which might worthily exercise the attention of the foremost province of the Dominion immediately following the cessation of war. The subject which has been allotted to me to introduce is: "The advisability of constructing sewers throughout the Province of Ontario."

The small town in Ontario is, almost without exception, provided with a waterworks system, originally designed for fire protection, but to-day, through progressive development, available as water supply and indeed, generally used as such.

The characteristic persistence of rural tradition in the small towns of Ontario has, however, retarded the complete acceptance of this new convenience, and according to available figures, only from eighty to ninety per cent. of the population are connected to such systems. Wells continue to be used by the remainder, some wells persisting even in very congested districts; especially is this true if the water supply of the town is subject to suspicion. Local officers of health are, however, rapidly dealing with the situation and are effecting improvements through two measures, in both of which they have the full co-operation of the Provincial Board. The first is the protection of municipal water supplies and their purification, borne if necessary by general rates. Second, the abolishing and closure of all wells within the area where urban conditions may be said to exist.

These measures, when properly carried out, invariably put the waterworks on a paying basis, eradicate water borne disease and introduce relatively large amounts of water into the home which must later be disposed of. It is to the disposal of wastes that your attention is directed.

It is not within the province of this paper to dwell at length on the various methods available for the disposal of wastes or to minutely describe the odours and stench occasioned by the improper discharge of slops and filth from sanitary conveniences. Neither is it necessary

Read before Annual Congress Canadian Public Health Association, May 27th, 1918.

to remind this audience of the complaints so commonly arising from the pollution of wells by cesspools and septic tank systems, complaints, by the way, only too frequently founded on fact. Nor is it required to touch the troublesome conscience that wakes up every time a medical officer of health gives countenance to the use of some artifice which, whilst removing some local nuisance, directly contravenes the Public Health Act which he has been appointed to uphold. It is enough for me to state that the proper way of protecting a town and of avoiding many causes of complaint is to induce the municipality to adopt a sewerage system. The step is recommended, not solely for the sanitary improvement bound to accompany it, but in addition for the economic advantages which are as truly evidenced in the inducement it offers to manufacturers to locate in such towns, as in the actual saving in cost and ease of payment, over other methods of sewage disposal.

The greatest obstacles to the improved sanitation of the small town are its rural tradition, and the opposition of wealthy and established citizens, whose tax rates are liable, from the peculiar nature of their holdings, to be disproportionately affected by local improvement rates.

The first of these obstacles is very fast disappearing, owing largely to the splendid organizing ability of our women. We have to thank also the excellence of the propaganda work of the extension services of the agricultural college and the women's institutes, and in no little measure the everlasting grind of the local medical officer of health.

The second obstacle is more difficult to handle, but can readily be counterbalanced by publicity, and as a final resort the mandatory powers of the Provincial Board of Health may be evolved. My own experience is that almost invariably when a systematic effort is made to ensure the passing of a public health measure involving a money vote, the citizens respond with substantial majorities.

There is one other obstacle which is worth mentioning. I have reference to the extent of old property held in downtown districts for which the taxes far exceed the rental values.

To properly appreciate the difficulties of effecting improvement of such property one must look to the experience of the larger cities. There one meets but one answer, "coercion." In order to meet the distress that arises in some instances through requiring the installation of sanitary conveniences, the Public Health Act provides that a local board of health in any city may direct that the cost, including interest at six per cent. on the deferred payments, be paid by the owner in equal successive annual payments, extending over a period not exceeding five years, and that such annual payments be added by the clerk of the municipality to the collectors' rolls and collected in like manner as municipal taxes. Sec. 25, ss. (2). The installation in such cases is directed by the city and then collected in the manner indicated.

The combined cost of installing plumbing and connecting to a sewer is not such a serious bill of expense as many imagine. I have inquired into the various items entering into the pre-war cost of housing upon a property worth \$4,000 and the facts appear much as follows:

Cost of house and forty foot lot.....	\$4,000.00	
Interest at 6%.....		\$240.00
Waterworks (cost included in annual charges, \$100).....	100.0	
Sewers (payable as local improvements, total \$100).....	100.00	
House connections to sewer.....	30.00	
Plumbing (included in \$4,000).....	185.00	
Hot water heating (included in \$4,000)....	180.00	
Furnace.....	180.00	
Radiators and piping.....	325.00	
Hot-air alternative.....	110.00	
<hr/>		
<i>Annual charges:</i>		
Eight tons of coal at \$7.50.....		\$60.00
Gas.....		12.00
Electric light.....		18.00
Water rates.....		16.00
Local improvements:		
Sewers.....	\$7.30	
Sidewalks.....	4.50	
Roads.....	10.00	
		21.80
Garbage collection.....		4.00
Taxes, school included, 25 mills. Valuation \$4,000.....		100.00
		<hr/>
		\$471.80
 <i>Sanitation:</i>		
Water.....	3.4% annual cost housing.	
Sewers.....	1.6% " " "	
Garbage.....	1.0% " " "	

or equivalent to 6.9 mills on the value of the property.

Engineering to-day should not attempt to lay out new towns for industrial purposes without providing sewers and water mains. This is true also in the temporary military encampments. The more obvious reasons are:

1. The skilled and essential portion of the industrial class is accustomed to city dwelling and both expect and demand the convenience of a water supply in the house.

2. Town sites which are not sewered or drained present, during the spring, intolerable conditions with which, as medical officers of health, you are only too familiar.

3. Engineers, as a class, think logically and appreciate the difficulties connected with and the complaints apt to arise from local disposal of water in congested areas and from the nature of the problem can recognize the economic advantages of a general system, advantages mainly of a town-planning nature, that is, advantages not capable of full realization to-day, but which appear more markedly as the town grows and congestion increases.

The most potent appeal, however, comes from the fact that investments promoting improved sanitation offer a substantial return in health insurance. This, of course, is not so apparent in towns hitherto blessed in having a general absence of disease, but is most assuredly so in all communities in which avenues for the approach of disease, hitherto wide open, are forever closed.

Of all classes benefitting by the sanitary improvement brought about by the extension of water and sewerage systems, the poorer industrial classes benefit the most. And of all age groups showing improvement in mortality statistics the group under one year or our infant death rate shows the greatest.

The connection between the living conditions of the labouring or industrial classes and infant mortality is very great. Those of you who have been following the infant mortality statistics of recently published reports in the United States, must have been struck with the fact that the highest infant mortality was invariably associated with the lowest incomes. Unfortunately, in our industrial towns, housing accommodation is expensive and the family with small income must accept very inferior housing accommodation, frequently must inhabit property which the landlord will not improve except by coercion.

The medical officer of health who is remiss in his duty and does not pursue such landlords and insist on destruction or improvement, must accept full responsibility for a portion of our infant mortality, often (as far as can be gathered from the meagre statistics as yet available) not less than three per cent. of the total births in the communities which he serves. As far as the workmen's cost of living is concerned, the increased rent chargeable to the installation of sanitary conveniences, and a connection to the sewer, never need exceed \$17 per annum, \$3 of which is for local improvements, \$2 for sewage disposal, and the

interest on \$200 at six per cent. or \$12 per annum. In terms of monthly rent this equals \$1.45 or at an average figure an increase from \$15 per month to \$16.50.

The other economic aspects of the question are fairly summed up in a statement appearing in the financial statistics of the United States Bureau, to the effect that the combined annual cost of sewerage and waterworks operation in American cities of between 20,000 and 30,000 population was \$3.65 per capita, and in a further statement in a report of the Consulting Sanitary Engineer of the International Joint Commission, to the effect that for border towns an average annual per capita charge of 77 cents represents the cost of constructing interceptors and sewage treatment, satisfactory for the protection of the purity of the boundary waters.

Available figures in Ontario are not greatly different and it can be shown that \$16.20 represents the per capita cost of installing a sewerage system in the average town. Interest and retirement of this amounts to \$1.40 per capita per year to which must be added a small maintenance charge, an outside estimate of which I would put at \$1, totalling \$2.40 per capita per annum.

I should like to state in closing that I believe both the Canadian Public Health Congress and the Medical Officer of Health Association might derive great profit from closer studies of town-planning movements. In conclusion some reference to housing is appropriate.

A little over a year ago I had the extreme privilege of inspecting a great deal of the new housing and town-planning work in England and in Scotland. Unless we in this country exercise greater care than we are doing to-day, we are going to perpetrate conditions akin to those for which they are endeavouring so hard to escape. The fault lies, not with our Legislature, which has shown itself only too ready to advance municipal betterment, but in ourselves and in our calm indifference to social wrongs, the growth of which to-day might well promote a stench in our nostrils.

I should like to state right here, so that there may be no mistake as to my meaning, that private philanthropy has at no time solved the housing problem, and in England even in those industrial centres where greatest amount of money has been spent, such as at Port Sunlight by Messrs. Lever Brothers, the percentage of the working class housed in the model village is less than thirty per cent. of the total persons employed. Industrial expansion, whether it takes place with high wages or with low, has in the past shown itself alike indifferent to the housing of the working man. The labourer cannot afford to pay the exorbitant profits on housing, such as is asked by our real estate exploiters, who at present control the flow of moneys to housing enterprises. This is well

evidenced in Canada also for we find that practically no advantage has been taken of the Ontario Act to encourage housing accommodation in cities and towns, in which it is provided that a company, incorporated under the Ontario Companies' Act, with a share capital, whose main purposes of incorporation are the acquisition of land in or near a city or town in Ontario, and the building and making thereon of dwelling houses of moderate size and improvements and conveniences, to be rented at moderate rents, may petition the council of such city or town to guarantee its securities to enable or assist it to raise money to carry out such main purposes.—3-4 Geo. Vc. 57, s. 2.

(1) If the council is satisfied that additional housing accommodation for those living or working in the municipality is urgently needed, and that the main purpose of the company is to help, *bona fide*, in supplying such need, and is not to make profits and that the company, without borrowing the money required, over and above the proceeds of the guaranteed securities, for the housing accommodation in contemplation, will be able to provide the same the council may, with the assent of the electors entitled to vote on money by-laws, pass a by-law authorizing and providing for the giving by the council of such guarantee to the amount and upon the terms and conditions hereinafter contained.

(2) It shall not be necessary to obtain the assent of the electors to the by-law if it is approved of by the Provincial Board of Health.—3-4 Geo. Vc. 57, s. 3.

9. The total amount of securities to be guaranteed shall not in the first instance exceed eighty-five per cent. of an amount to be fixed in the deed or deeds of trust as representing the value of the land and housing accommodation and improvements to be built and made thereon; and the deed or deeds may make all convenient provisions for the expenditure of additional money on such land and housing accommodation and improvements, and for the acquisition of additional land to be made part of the mortgaged premises and for expenditure thereon, and for the issue of additional guaranteed securities under such deed or deeds but so that the total amount outstanding shall not exceed eighty-five per cent of the value of the mortgaged premises to be ascertained and fixed in the manner provided in such deed or deeds and the issue of such additional securities in advance of expenditure, and for the disposition of the money to be raised thereon by sale, pledge or otherwise pending the expenditure thereof.—3-4 Geo. Vc. 57, s. 8.

Section 12 is the obstacle. It reads: "No dividend upon the capital stock of the assisted company or other distribution of profits among the shareholders shall be declared or paid exceeding six per cent. per annum in any one year."

Why cannot some representative body, such as our Banking Associations, be requested to come forward frankly with a statement that for speculative purposes, to which we have relegated housing enterprises, six per cent. is not enough, and state what they deem is a proper per cent. to attract the necessary moneys?

The first step in promoting a forward step of this kind is to create a supervisor who will undertake the preliminary work and preliminary compilation of statistics, much of which must be done by the municipalities themselves.

It is to be regretted that at the present time our municipal government, with the exception of one or two cities, is lamentably lacking in statistical information of any kind, relating directly to the Boards of Health. No effort is made to even accurately determine the number of houses in the cities and towns in Ontario. A census is returned annually to the Department of Agriculture showing the assessment valuation of each town which, if properly prepared and analysed, should yield information concerning the housing and rentals. No attempt is made to analyse the overcrowding statistics, though a police census of population is required annually for the purpose of returns to the Departments of Agriculture and the Ontario and Municipal Railway Board.

The engineering departments are almost as lamentably backward, and no effort is made to tabulate the number of premises lacking connection to either the waterworks or the sewers, although in most instances accurate references are kept as to whether an individual premises is connected to them.

And no effort apparently is being made by the boards of health to determine, in urban municipalities, the number of connected premises, nor is there, with the exception of one or two instances, any well-directed and continuous effort being made towards compelling all premises to connect to water mains and sewers.

Efforts of this Congress toward obtaining improvement in this regard must be well directed in order to awaken individual municipalities. They might also result in the approval of suitable types of records from which annual summaries can be made to the general advantage of the Dominion.

A Case of Generalized Vaccinia

J. G. FITZGERALD,

Major C.A.M.C., D.A.D.M.S. II Sanitation M.D. 2; Associate Professor of Hygiene; Director,
Antitoxin Laboratory, University of Toronto.

THE symptoms of generalized vaccinia in man are only very rarely observed. Rosenau (1) casts a certain doubt upon cases heretofore reported. Claude Ker (2) on the other hand, describes the symptoms of this condition which, however, he states is seen only very rarely. When the symptoms of generalized vaccinia are noted, it is an indication of a general blood infection. It is actually, from an immunological standpoint, a matter of greater interest to note that cases of generalized infection are of such rare occurrence having in mind the fact that in cowpox, the blood of calves about two weeks after vaccination, contains antibodies capable of neutralizing the virus of cowpox.

I am indebted to Captain J. S. McCallum, M.C., C.A.M.C., and Captain H. C. Wales, C.A.M.C., for the opportunity of seeing and reporting this case.

The patient, Nursing Sister R—, was admitted to hospital September 9th, 1917. Past history: Had Scarlet fever, measles and German measles in childhood. No other illnesses. Has been vaccinated several times (five) since the age of 14. She was given three doses of triple (typhoid and paratyphoid) vaccine during August 1917.

The patient is 29 years of age, her physical examination showed nothing abnormal previous to smallpox vaccination on September 3rd, 1917. Eight days later her arm became swollen, reddened and itchy. At this time the site of vaccination appeared as a dark area, about half an inch in diameter, surrounded by a larger lighter coloured inflamed area. On the ninth day the arm became more inflamed, the zone covering, roughly, the deltoid muscle. The inflamed region at this time resembled erysipelas but the margins were more diffuse. A rash covering the whole body, including the palms of the hands and the soles of the feet developed, on the ninth day. The patient had chills and headache and the temperature was 103° F., pulse, 110. The rash which very much resembled that of measles, but lacked the dusky tinge, involved particularly the flexor surfaces, and the palms of the hands and the soles of the feet. The patient complained of intense itching which was relieved by the application of a solution of 1.75 carbolic acid. The lymphatic glands were slightly enlarged generally. There was no complaint of sore throat, no evidence of coryza and no Koplik spots were seen.

On the tenth day it was noted that the area of local inflammation was still marked and intensely itchy. The infraclavicular and subclavian groups of glands were enlarged and tender; but the axillary glands were not involved; rash still present, but not so marked. On the eleventh day the rash disappeared, temperature, 100.3° F., pulse, 100; patient felt very depressed at this time. On the twelfth day the rash reappeared presenting the same appearance as before; temperature 102.4° F., pulse, 110. On the thirteenth day the rash disappeared and the area of local inflammation was seen to be lessening in extent. On the fourteenth day the rash reappeared, but in much less intense form; temperature 100° F., pulse, 90. The rash finally disappeared on the fifteenth day and did not reappear. The patient made an uneventful recovery and no desquamation was observed. Unfortunately it was impossible, for several reasons, to carry on the necessary experiments to determine whether or not the patient's blood contained antibodies capable of neutralizing the virus of vaccinia.

It would seem from the facts here recorded that this patient suffered from an undoubted attack of generalized vaccinia.

- (1). *Rosenau*, Preventive Medicine and Hygiene, 1917, p. 22.
 - (2). *Ker*, Infectious Diseases, 1909, p. 179.
-

Botulism*

ERNEST C. DICKSON

Captain, C.A.M.C.

*From the Laboratory of Experimental Medicine, Stanford University Medical School,
San Francisco, California.*

MY object in appearing before you is to draw your attention to a type of food-poisoning caused by the ingestion of home-canned products which has assumed considerable importance on the Pacific Coast of the United States during the past few years and which is occurring with increasing frequency in other portions of that country. I am unaware of any established cases in Canada, although there is little doubt that some will appear, but recent reports have shown that botulism has occurred with some frequency in England, and it therefore behooves us to become acquainted with the condition and to recognize the causes for its occurrence and the means by which it can be prevented.

Botulism or Allantiasis, the old Wurstvergiftung of Southern Germany has been recognized as a serious type of food-poisoning since the early part of the nineteenth century, but it has been thought to be exclusively a type of meat poisoning since the greater number of cases, as the name implies, were caused by the ingestion of sausages. So firmly has the idea that it is exclusively a meat poisoning been established that when, in 1904, an outbreak of poisoning from bean salad occurred in Darmstadt in Germany, Landmann, who investigated the outbreak and who proved that it was indeed botulism, made the statement that there must have been some pork cooked with the beans since it is impossible for the toxin of *B. botulinus* to be formed in other than meat-containing medium.

Our accurate knowledge of the fact that botulism may be caused by the ingestion of foods of vegetable origin dates from December, 1913, when there was an outbreak of food-poisoning of the botulinus type at a Sorority house at Stanford University, in which twelve persons were poisoned by eating a salad prepared from home-canned string beans. We were unable to prove from this outbreak that the intoxication was indeed botulism, as we were unable to demonstrate *B. botulinus* from any of the materials which were available for bacteriologic examination, but, stimulated by this outbreak, we obtained cultures of *B. botulinus* from the Museum of Natural History and from the Department of Bacteriology of Columbia University in New York and commenced a series of

*Read before Annual Meeting Canadian Public Health Association, Hamilton, May 27-8, 1918.

experiments which have been continued until a few weeks ago. As a result of our experiments we have established beyond all doubt that the toxin of *B. botulinus* may be formed in mediums prepared from peas, beans, corn, asparagus, artichokes, peaches, pears, apricots and prunes; and since the outbreak which occurred at Stanford University, we have been able to collect records of a fairly large series of outbreaks in which it was established that the poisoning was caused by the ingestion of one or other of these vegetables or fruits, all of them home-canned.

The symptomatology of botulism differs from that of the usual types of food-poisoning in that the intoxication is essentially one which involves the central nervous system. The condition is not an infection, but is a true intoxication, the poisoning being produced by a bacterial toxin, somewhat analogous to the toxins of diphtheria and tetanus, which is formed in the food before it is eaten and which is ingested with the infected food. The toxin is never formed within the body, as the optimum temperature of *B. botulinus* is from 24 to 28 degrees cent. and the toxin will not form at a temperature of 37.5 degrees cent., the normal temperature of the body. It differs from the toxins of diphtheria and tetanus in that it is not digested in the gastro-intestinal tract but is absorbed unchanged into the blood stream.

The symptoms usually appear from eighteen to thirty hours after the ingestion of the poisonous food, although they may appear in from four to eight hours. The earliest symptom is usually a sensation of languor and fatigue, but this is soon followed by characteristic disturbances of vision, blurring the vision, diplopia and loss of accommodation. There is often early vertigo and incoordination of muscular movement. Dryness of the mouth and pharynx, a sensation of enlargement of the tongue and a peculiar sensation of constriction of the throat soon follows. There is marked inhibition in the serous salivary secretion and the mucus portion is secreted in a thick, tenacious form which is removed from the pharynx with great difficulty. Speech soon becomes impaired and unintelligible, and there is difficulty and eventually inability to swallow. The patients suffer greatly from strangling spells induced by their attempts to swallow or raise the thick mucus from the pharynx. There is rarely any acute gastro-intestinal disturbance, although there may be initial nausea, vomiting and diarrhoea. A characteristic feature of the intoxication is that there is obstinate constipation which may be so severe as to resist all efforts to induce evacuation of the bowels.

There is early blepharoptosis and mydriasis with loss of pupillary reaction of light, and occasionally there is paralysis of all the extrinsic muscles of the eye so that the eye-ball remains fixed in the socket. Occasionally there is paralysis of the muscles supplied by the motor portion of the fifth, and by the seventh cranial nerves, but this is more

uncommon. There is loss of the pharyngeal reflex in the majority of cases. There is marked general muscular weakness, but there is no true paralysis of the skeletal muscles and the reflexes are not lost. True paralysis is apparently confined to the muscles which are supplied by the cranial motor nerves.

A striking feature of the botulinus intoxication is that there is no disturbance of mentality and that sensation remains intact. There may be some inhibition of the sense of taste but this is probably chiefly, if not entirely, due to the absence of the serous salivary secretion. There is rarely any disturbance of hearing. The disturbances of vision are entirely dependent upon the loss of function of the intrinsic muscles of the eyes as the retina rarely shows any change. There may be initial headache and nausea, but there is otherwise rarely any pain.

The temperature is usually sub-normal, in fact, when fever occurs one should be strongly suspicious of the onset of some intercurrent infection such as broncho-pneumonia. The pulse rate may be slower than normal at first, but it soon becomes rapid and the combination of a temperature of between 96° and 97° F., with a pulse rate of over 130 is very striking.

The intoxication usually reaches its maximum severity in from four to eight days, and then, if the patient survives, gradually subsides. Convalescence is very slow and tedious. In fatal cases death usually occurs in from four to eight days, and it is seldom that persons who survive for ten days succumb unless some complication such as aspiration pneumonia ensues. Death usually occurs from cardiac or respiratory failure.

The mortality in the European cases, occurring during a period of over one hundred years, is about forty per cent, but in the United States, probably because only the severe cases are recorded, the mortality has been between sixty-five and seventy per cent. When patients recover there is rarely any persisting disability.

Treatment is most unsatisfactory. It is important to wash out the stomach even though the poisonous food has been eaten several days before, as there is early inhibition of stomach motility, and cases are recorded where portions of the poisonous meal have been found in the stomach at autopsy several days after it was ingested. Purgation should be induced if possible, preferably with magnesium sulphate or some similar saline and the lower bowel should be frequently washed by enemata. Simple, nourishing food should be given in sufficient quantities and a generous supply of water should be administered, but it should be remembered that on account of the loss of pharyngeal reflex and the frequent strangling spells when the patient attempts to swallow, there is constant danger of insufflation pneumonia. It is therefore

advisable to administer food and laxatives by stomach tube and to give water by hypodermoclysis or by rectum. The Murphy drip has been found to be very satisfactory.

Stimulation should be given as required, strychnin probably being of value. Digalin has been used extensively to combat cardiac failure, and pilocarpin may be used to relieve the dryness of the mouth and pharynx, although pilocarpin should be given with caution since the patient is unable to cough up fluid from the lungs if pulmonary edema is induced.

Antitoxic serum may be produced, but experiment has shown that it is of little therapeutic value unless it can be given very early. It affords full protection to guinea pigs when mixed in vitro and injected with the toxin, but when given more than twelve hours after the administration of a M.L.D. of toxin there is little protection. I have used antitoxic serum in two human cases of botulism and both recovered, but I am not at all certain that the serum in any way influenced the course of the intoxication as it was several days after the ingestion of the poisonous food that the serum was given.

The pathology of botulism is extremely interesting in that there is a peculiar, characteristic type of thrombus formation in the blood vessels of practically all organs, the thrombus being studded with leukocytes. The symptoms are not explained by the presence of the thrombi, however, as the thrombi are rarely found in animals which have died within forty-eight hours after the administration of the toxin. There is also marked hyperemia of practically all organs and usually there are many hemorrhages in the meninges and in the lungs and serous surfaces. Our experiments and our histologic examination of tissues from human victims do not support the theory that there is a so-called specific action on the finer structure of the nerve ganglion cells.

The importance of this type of food-poisoning at the present time lies in the fact that by far the greater number of cases which have occurred in the United States have been caused by the ingestion of home-canned vegetables and fruits. The reason for the prevalence of the botulinus toxin in home-canned vegetables and fruits is that many of the methods of sterilization which are employed in home-cooking are not sufficiently potent to kill spores of *B. botulinus* when mixed with albuminous material in containers such as are used. The common practice is to immerse the filled jar of vegetables or fruit into boiling water in a wash-boiler for from two to three hours, and this is not efficient. We have found in test tube experiments with emulsions of spores of *B. botulinus* in brain and in vegetables mediums that the spores will resist immersion into actively boiling water for more than two hours and will resist immersion into water at 95°C. for more than three hours. Eight strains of *B. botulinus* were tested in this way and the results were

constant in seven. When one considers the time necessary for the penetration of heat into the centre of a closely packed jar of vegetables it is readily understood that the sterilization in the centres of the jar may be incomplete.

The addition of lemon juice or vinegar to vegetables as recommended by Cruess of the University of California, greatly reduces the resistance of the spores to heat, but lemon juice must be added in amounts of at least four per cent. to be of value. I have record of one outbreak of botulism which was caused by the ingestion of string beans, to which "a small amount" of lemon juice had been added, but evidently the amount of lemon juice was insufficient. Our experiments have shown that the mere presence of four per cent. lemon juice or of sixty-five per cent. cane sugar in bouillon, is not sufficient to prevent the growth of *B. botulinus* and the formation of its toxin, although they do inhibit the toxin formation to a certain extent. It is therefore apparent that one must not depend upon lemon juice or sugar to preserve the fruits or vegetables unless the sterilization has been complete.

A very few outbreaks of botulism caused by commercially canned vegetables have been recorded, but they are very rare. The rarity depends, I believe, upon the fact that in the United States the vegetables are sterilized with steam under pressure at a temperature of from 240° to 250° C. The freedom from contamination of commercially canned fruits which are canned at lower temperatures is probably dependent upon the fact that only carefully selected, hand-picked fruit is canned. In the only instance of poisoning from home-canned fruit in which we were able to get all the data it was found that the fruit had been unsaleable, wind-fall fruit, and it is probable that the fruit had become contaminated with *B. botulinus* while lying on the ground.

It must not be understood that I am advocating any decrease in the amount of home-canning of perishable foods, but I am convinced that as professional men who are interested in the preservation of the health of the community we should take steps to have the public understand that the use of home-canned food is not unattended with danger, and that with proper care, all danger of poisoning may be averted. Very often the home-canned food which is contaminated with toxin of *B. botulinus* is so evidently spoiled that it is discarded at once and no accident occurs unless it is fed to domestic animals or fowl. There are, however, many instances when spoiled home-canned food has been fed to domestic animals and fowl and they have developed symptoms which are analogous to those produced by botulinus intoxication in human beings, limberneck in chickens and turkeys, forage poisoning in horses and mules and paralysis in hogs. At other times the food is not so evidently spoiled and poisoning may be caused by the housewife tasting it to determine

whether it is good. I have records of six outbreaks of botulism which were caused in this way, and five of the six victims died. Usually there is a peculiar cheese-like odour in food which is contaminated with toxin of *B. botulinus* and it is this odour which attracts the housewife's attention and causes her to taste the food. Often, however, this odour is so faint that it does not attract attention unless one is familiar with it and is looking for it.

All of the cases of poisoning by home-canned products have occurred when the food has not been cooked before it was eaten. It is a common thing to serve home-canned vegetables without cooking as salad, and in such cases there is especial danger as the toxin has a peculiar sharp taste which is quite palatable in salad. At other times the poisoning has occurred after the ingestion of fruits which are "a little turned", and which are not displeasing to the taste. It has been definitely established that the toxin is destroyed if it is heated to the boiling point, and that contaminated food is entirely safe in so far as botulinus intoxication is concerned if it is cooked before it is eaten. There are numbers of instances in which portions of contaminated food has been cooked and eaten without ill-effect, whereas the remaining portion has been eaten as salad and has caused fatal poisoning.

The important facts that should be emphasized in connection with botulinus intoxication from home-canned foods are the following:

1. That only the best available methods of home-canning should be recommended.
2. That the housewife should not be discouraged from canning perishable foods, but that she should be instructed as to the possible dangers of poisoning in using home-canned food and as to the methods of preventing its occurrence.
3. That under no circumstances should home-canned food which shows any sign of spoilage be used as food or even tasted.
4. That the slightest indication of an unusual odour should be regarded as sufficient reason for discarding home-canned food.
5. That all home-canned food should be boiled before it is eaten or even tasted.

If these precautions are taken there will be no danger of the occurrence of food-poisoning of this type from home-canned products.

For a more complete discussion of Symptomatology and Pathology, see Botulism—A Clinical and Experimental Study by Dickson, E. C. Monograph No. 8 of The Rockefeller Institute for Medical Research. (In press).

Social Background

Children as Wards

REV. P. J. BENCH.

THE "neglected" or "abandoned" child has always made a direct appeal to the universal mind. The call to relieve a child in distress has ever been felt to be imperative. Our greatest problem has been to understand sympathetically, the needs of the child and to mould him into a character that will enable him to take his rightful social and economic position in society. If all of us had a clearer understanding of our social and spiritual duty towards such a child, we would perform this duty more in the way of service than in merely subscribing towards his keep.

More and more is it brought home to us that every "neglected" and "abandoned" child that is a charge upon public or private charity, and is likely to remain so, should be made a ward of The Children's Aid Society.

The Children's Aid Society is the legally constituted substitute for the parents. In fact the chief reason for its existence is to act in the place of parents to neglected and abandoned children and those without proper guardianship; to find foster homes for them and supervise them until twenty-one years of age.

In this province the various local societies are aided in their follow-up work by inspectors from the Provincial Children's Aid. These inspectors visit the foster homes, interview the wards and foster-parents and report the result of their inspection to the local Children's Aid. In this way all societies are kept in constant touch with their wards and are in possession of the requisite information for the proper discharge of their duties. It is unfair to the child and a mistake for private agencies to place out children without first having them made wards of an incorporate society. For many reasons, chiefly financial, these private agencies make no systematic attempt at visiting placed-out children and are not familiar with the child's environment, its progress or otherwise. Such a system may easily develop into a serious injury to the child and later on increase the public burden.

If the normal, natural family home be the best place for the normal child, does it not follow that for the normal destitute and dependent child the best place for the development of his physical, mental and moral structure is the normal family foster home? There is a beautiful

theory that there is a "childless home awaiting every homeless child", but those of us experienced in placing-out work know that in practice the theory falls down lamentably. Fortunately, the days are gone in which were conceived and nurtured the idea that "any old home" or place is good enough for the child unfortunate enough to be homeless and dependent. The tendency of modern times is to look upon the homeless child, not as a mere chattel whose future demands no study or attention, but as a real human being composed of body and soul, having the same natural rights as the child of the normal family, who is in fact a sacred charge that God has given us, and whose education and Christian training and development should be as far as possible on a par with that which the child of any normal family home receives.

Intelligent discrimination must, therefore, be exercised in choosing foster homes, as well as in selecting the proper type of child for the foster home. Indiscriminate placing-out of children, without investigation and follow-up work, can only result in getting poor, or at best, indifferent results. In fairness to the foster parents and for the welfare of the child, it is essential that all placed-out children be frequently and regularly visited, and this brings home to us the necessity of making all such children wards of a regularly constituted Children's Aid Society that has inspectors for such purpose.

FOUNDATION FOR THE FUTURE.

To teach self-control, to develop the will that it be a firm and good will, and to direct it toward good ends through the religious forming of the Conscience, is recognized by parents and teachers alike as the only safe foundation on which to build up the child's future welfare. It is only in proportion as a system of instruction or a method of child training corresponds to this principle and develops out of it that we can know it to be good.

Social Control and the New State

F. N. STAPLEFORD, M.A.

THE quality of a national life, is to a very large extent, the resultant of the kind of a balance which is struck between personal liberty and social control. In each state the proportions and the area of life in which each finds expression, is quite different. The kind of thing which is quite permissible in one state, may be under severe restrictions in another. Other things which one nation enforces, simply

by the power of public opinion, is in another enforced by a definite legislative code.

Social control may be exercised in various ways. The most definite kind of control is, of course, that of legal enactment; but there are other means of enforcing conduct no less efficacious. The ordinary conventions of life as to what constitutes proper conduct, the code of a profession, fraternity, or church, are all powerful instruments, which work, sometimes subtly and sometimes openly, in the shaping of conduct. What we call personal liberty is not altogether the liberty to do anything we like within legal limits, for there are many conventions and prejudices quite apart from the law which few would care to violate, when such violation carries, with it a larger or smaller amount of social ostracism. In the early primitive days, the individual who violated the tribal code in important particulars, would suddenly find that the tribe did not any longer exist for him. He became a "kin shattered" man, one who stood quite outside the pale of the ordinary tribal life. No one would eat with him, talk with him, or have any dealings whatever with him. He was only punished by being left alone, but a more terrible punishment could not have been devised. The modern equivalent of that same influence, lies in the power of public opinion. If this becomes properly directed and anything like unanimous it is irresistible. The difficulty however in a modern, complex state is that only occasionally, and sometimes quite unjustly, is this force exercised. Often an individual, whose anti-social conduct excites indignation, is sheltered within some small section or class whose goodwill he still retains.

What shall be the balance in the new state? To what extent is public opinion to be trusted to secure the necessary social ends, and to what extent is a definite legislative code necessary? The trend at present is certainly in the direction of the latter. The number of agents for the direction and moulding of public opinion were never so numerous and active and yet there is a very definite trend in the direction of building up legislative safeguards.

Canada is particularly unfortunate in that the tradition of individualism is here very strong, while on the other hand there has been very considerable apathy and lack of a quick and responsive public opinion, when public rights were invaded. Canada has thus been doubly unprotected. Its social code is still crude and undeveloped, and this lack of responsiveness on the part of public opinion thus fails to fill the gap left by the lack of legal enactment. It is important to note that an individualism carried to extremes results in a tyranny just as repulsive though different in character, from that which results from excessive social control. The instinct of liberty is strong in Anglo-Saxon blood, and Great Britain for a long time firmly believed that the amount of

liberty a nation possessed stood in inverse ratio to the size and complexity of her legal code. The more laws the less freedom. And yet in that age when individual rights were so vehemently proclaimed, children of seven and eight years old, worked fourteen to sixteen hours a day in factories; women slaved half naked in coal mines, and men enjoyed the liberty of seeing their children starve while they walked about in forced idleness in some period of industrial depression. The squalid misery of a large section of Great Britain's population was eloquent testimony that an unbridled individualism resulted in an economic tyranny just as hateful as the political servitude which they so strongly despised and condemned in other countries. The lesson has been pretty clearly learned, that the only way to possess freedom is to limit it.

Canada has a very definite task ahead in elaborating the machinery of social control. The danger here is certainly not the danger of the tyranny of political autocracy, but of that economic tyranny which results from the exploitation of natural resources by the few for their own benefit, because of a lack of legal safeguards. The lesson which we are trying to learn at the present time is that freedom is just as much a matter of economics as of politics. Changes are coming about very rapidly in individualistic Canada. The war is a great destroyer of routine and of inefficient traditions. Compulsory military service has become an established fact, and this carries with it some very important implications. If the country has the right to compel a man to risk his life for the good and safety of the whole, what vested interest or entrenched privilege can hold itself more sacred? Compulsory military service is in itself an extreme expression of a social control which cannot justly rest there but must find other expressions. The obliteration of party lines, and the resultant focusing of public opinion upon real national issues, rather than upon the by-play of political jockeying, has resulted in a much freer and more responsive expression of national convictions. Railway nationalization has taken immense strides, and the proposal to consolidate in one great system, under public control, all the important lines in Canada has suddenly been removed from its position as a theme for a debating society, into the active arena of political possibilities. Food control, although exercised at first in a singularly timid way, has become increasingly firm and decisive and is another example of the progress of social control in Canada.

Large tasks lie in the future. The removal of the continuous fear of war and the putting of international relations on a secure basis; the building up of a progressive democracy in which social control shall be exercised by the many rather than by the few; the reorganization of industry in such a way as to give the worker a larger part of the increased

earnings of modern industry and also greater security and protection from ever-recurring economic crises; the more adequate protection of childhood and the reorganization of education on the basis of the awakening of intelligence and the development of personal force as the supreme ends; the building up of a simplified and a socialized creed—all these are tasks, not for a remote future, but press for immediate attention and action.

A more alert and responsive public opinion and the elaboration of a great code of social legislation are two ways in which the broader freedom of the future shall be secured by limitation. Has not the Church also a great contribution to make to this problem of social control by holding aloft those ideals at once social and individual, which persuade rather than compel, and convince rather than overawe? There is no action so socially valuable as that which is directed by spiritual forces. "To walk humbly" with God, still furnishes the finest motive force to influence the individual to "do justly and to love mercy".



The Provincial Board of Health of Ontario

Reports from Local Boards of Health for May show Measles to be very prevalent in some localities. Over 1,900 cases and 11 deaths are returned for the month. Two cities, Toronto and Hamilton, contributed no less than 1,663 cases and 10 deaths. The former 979 cases and 7 deaths and the latter 684 cases and 3 deaths.

It is gratifying to know that Scarlet Fever shows a decrease of 60 cases and 10 deaths compared with April last. Diphtheria also shows a marked reduction from 249 cases and 22 deaths to 190 cases and 14 deaths in May. The Provincial Board of Health distributed to localities where the disease prevailed, 6,163,000 units of Antitoxin at a cost of \$924.00.

Smallpox has increased from 39 cases to 71 over April, but it is more sporadic than epidemic as the cases are spread over seventeen municipalities, extending from Prescott County in the east to Essex in the west, and as far north as Sudbury and Parry Sound districts. The disease is of the same mild type the Province has experienced for the last twenty-five years. Only one death occurred since the beginning of the year out of 322 cases.

The following places reported the disease: London 12, Belleville 7, St. Thomas, Vankleek Hill and Pickering in Parry Sound district 6 cases each. Windsor, and Hawkesbury 2 cases each; Blind River, Chatham, Kingsville, Forest and Worthington 1 case each; French River 4 cases; Warwick and Dawn Townships 5 cases each; East and West Hawkesbury Townships 2 cases each; Byng Inlet 4 cases.

Infantile Paralysis caused 2 deaths, one in Woodstock and one in Orillia Township. Keewatin Town reported 4 cases.

Cases and Deaths from Communicable Diseases reported by Local Boards of Health for the month of May, 1918.

COMPARATIVE TABLE FOR MAY.

<i>Diseases.</i>	1918		1917	
	<i>Cases.</i>	<i>Deaths.</i>	<i>Cases.</i>	<i>Deaths.</i>
Smallpox.....	71	0	10	0
Scarlet Fever.....	324	6	200	2
Diphtheria.....	193	14	198	9
Measles.....	1935	12	663	3
Whooping Cough.....	251	8	88	1
Typhoid Fever.....	27	4	184	6
Tuberculosis.....	209	124	151	75
Infantile Paralysis.....	6	2	1	1
Cerebro-spinal Meningitis..	13	6	5	5
	3029	176	1500	102

COMPARATIVE TABLE FOR THREE MONTHS—MARCH, APRIL AND MAY.

<i>Diseases.</i>	1918		1917	
	<i>Cases.</i>	<i>Deaths.</i>	<i>Cases.</i>	<i>Deaths.</i>
Smallpox.....	153	1	35	0
Scarlet Fever.....	1046	31	657	11
Diphtheria.....	789	59	777	56
Measles.....	4652	38	3205	10
Whooping Cough.....	777	14	276	7
Typhoid Fever.....	92	13	260	21
Tuberculosis.....	497	317	498	280
Infantile Paralysis.....	8	3	2	1
Cerebro-spinal Meningitis..	47	28	35	24
	8061	504	5745	410

Editorials

New Sections in the Canadian Public Health Association

THREE new sections have been formed in the Canadian Public Health Association. The section on Child Welfare was formed several months ago while at the annual meeting, sections on Mental Hygiene and on Social Hygiene were added.

The formation of these sections augurs well for the future of the Association. It is to be hoped that it means a stimulus to accomplishment in these departments of public health work, and that next year each new section will be able to report decided progress. The programme provided by the section on Child Welfare shows that child welfare workers are alive to the necessities and possibilities of the situation. The formation about a month ago of a strong National Committee on Mental Hygiene provides ample demonstration of the fact that the subject of mental hygiene will receive its meed of attention. The first duty deputed to the new section on Social Hygiene is that of organizing a National Committee for Combatting Venereal Disease. All of which means that the Canadian Public Health Association is going to bear a large share of the work of making Canada fit for Canadians to live in.

On Leaving it to the Government

Captain Hattie's suggestion in his presidential address that we are too fond of waiting for government action in matters which we might very well have undertaken and executed ourselves, is very much to the point. Canadian people, perhaps more than most people, are apt to look to Governments as sources of all virtue (except on election day when there are sometimes differences of opinion) and generally speaking tend to be somewhat apathetic on public questions.

If people would only realize it the accomplishments of governments really rest in the people's hands. Public opinion *is* the strongest factor in producing reforms, and it is not the opinion of a few men in a cabinet, but of the people at large. The people can have exactly what they want if they take the trouble to ask for it.

Recently the formation of committees in various parts of the country to agitate for reforms of various kinds, and the ease with which public

opinion can be stirred up on worth-while questions, lead one to believe that extra government organization will have much to do with solving public questions in the future. The policy of the average citizen should not be the gentle *laissez faire* attitude too common in the past, but a strenuous endeavour to stimulate the government, to support the government in constructive work and to do himself as often and as efficiently as possible, all things of which he is capable which will make for the public good.

The Trail of the Medical Vampire

One cannot but wonder how long Canada will continue to tolerate the patent medicine nuisance. Peruna, Nature's Creation and Psychine are succeeded by a series quite as notorious and the public continue to buy Tanlac, Dodd's Kidney Pills and other concoctions quite as useless. It is estimated that Canadians spend yearly on patent medicines no less than \$8,000,000.

Mr. Frederick Paul, a knight errant, tilting continuously against the patent medicine men, is to be congratulated on the fearlessness and vigour with which he continues his campaign. The bringing of the facts before the public will in the end bring results—perhaps some day will even persuade our newspapers to desist from admitting to their advertising columns the misinforming statements which are continually being made by patent medicine manufacturers and vendors. In the long run such action will be the biggest factor in eliminating a business which has become a national pest. Meanwhile more power to the elbow of the energetic editor of *Saturday Night*.

Health Conservation a War-time Necessity

So many physicians have entered the army and navy service that it is becoming increasingly difficult for those who have the civilian population under their care to give them proper attention. The prevention of many diseases by prophylactic measures is therefore assuming greater proportions each day as the war continues. Smallpox and typhoid fever have been practically eliminated as army diseases, simply because their prophylactic treatment has been made a routine procedure. Typhoid can be eliminated from the civil population just as it has been eliminated in the army, and it is the duty of the physician to suggest to his patients that they protect themselves against epidemics of disease which can be avoided by proper prophylactic measures. In these days when every individual is needed to carry on the work of the large factories, which are supplying our troops with the sinews of war, there should be as little sickness as possible, not only because the production of war materials is retarded when skilled workers are unable to discharge their duties, but because it is fundamentally wrong to take up space in our hospitals and the time and energy of nurses and physicians with cases of diseases that can be prevented.

The time factor is an important one just now and those prophylactic agents which bring about immunity in the quickest possible time and with the least loss of energy should be given preference. It is fortunate therefore to have at hand sensitized bacterial vaccines which, according to Besredka and other authorities who have confirmed his findings, bring about an extremely rapid immunizing response—the immunity beginning twenty-four to forty-eight hours after the injection of the serobacterin. In the case of ordinary bacterins the immunity does not begin so rapidly and local and general reactions are more severe and prolonged. The value of typhoid immunization with a bacterial vaccine composed of a suspension of killed typhoid bacilli in physiological salt solution is unquestioned. The greater rapidity of bringing about immunity by using the sensitized vaccine or typho-serobacterin gives the latter product preference, especially at this time.

It is also particularly timely to mention that many sufferers from hay fever have been able to remain at their posts because of prompt prophylactic immunization with Hay Fever Pollen Extracts. The time for immunizing fall hay fever sufferers is at hand. Complete literature on Typho-Serobacterin and Hay Fever Pollen Extracts can be obtained from the H. K. Mulford Company of Philadelphia.—Advert.

The Vortex Individual Sanitary Service is made to take the place of glasses and dishes at soda fountains and other places where refreshments are sold. It consists of metal holders and pure white paper cups. The paper from which the cups are made is a pure white sulphide stock, free from impurities. Before being made into cups it is treated to a thin coating of highly refined paraffin which is deposited on the paper at a very high temperature. After ice cream, drinks, etc., are served to the customer the cups are destroyed.

The cups have the same advantages from the standpoint of preventing the spread of disease as the individual drinking cup and are to be recommended for similar reasons.—Advert. Canadian Wm. A. Rogers, Ltd.

